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**PATENT APPLICATION**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Teruhiko MIYAKE et al.

Group Art Unit: 3748

Application No.: 10/540,012

Examiner: B. TRAN

Filed: June 22, 2005

Docket No.: 124284

For: NO<sub>x</sub> DISCHARGE QUANTITY ESTIMATION METHOD FOR INTERNAL  
COMBUSTION ENGINE

**REQUEST FOR RECONSIDERATION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In reply to the March 22, 2006 Office Action, reconsideration of the rejection is respectfully requested in light of the following remarks.

Claims 1-10 are pending in this application. Applicants appreciate the Office Action's indication that claims 2-10 are allowable.

The Office Action rejects claim 1 under 35 U.S.C. §102(e) over U.S. Patent No. 6,705,077 to Uedahira et al. (hereafter "Uedahira"). Applicants respectfully traverse the rejection.

The Office Action alleges Uedahira discloses a NO<sub>x</sub> discharge quantity estimating method where the NO<sub>x</sub> is estimated from a quantity of NO<sub>x</sub> generated in a combustion chamber as a result of combustion and a quantity of NO<sub>x</sub> circulated into the combustion chamber via the EGR apparatus.

Claim 1 currently reads:

An NO<sub>x</sub> discharge quantity estimation method for an internal combustion engine equipped with an EGR apparatus for circulating to an intake passage of the engine a portion of exhaust gas flowing through an exhaust passage of the engine, characterized in that a quantity of NO<sub>x</sub> contained in exhaust gas discharged from the exhaust passage to the outside is estimated on the basis of a quantity of NO<sub>x</sub> generated in a combustion chamber as a result of combustion and a quantity of NO<sub>x</sub> circulated into the combustion chamber via the EGR apparatus.

Applicants note that what is being claimed is a method for estimating the "quantity of NO<sub>x</sub> contained in exhaust gas discharged from the exhaust passage." As claimed, this is based on two quantities as underlined. In contrast, Uedahira discloses calculating an estimated quantity FNO<sub>x</sub> identified as the amount of FNO<sub>x</sub> estimated to be exhausted from engine 3 (col. 9, lines 56-58). Uedahira discloses estimating the value FNO<sub>x</sub> from the engine rotation speed NE, the intake pipe absolute pressure PBA and the preceding value of LCMD0 of the target valve lift amount (col. 9, lines 52-56). Nowhere does Uedahira disclose estimating the NO<sub>x</sub> amount of the exhaust gas based on the quantity of NO<sub>x</sub> generated in the combustion chamber due to combustion and the quantity of NO<sub>x</sub> recirculated to the combustion chamber by the EGR apparatus. As Uedahira does not teach the limitations of claim 1, claim 1 is patentable over Uedahira. Accordingly, Applicants respectfully request withdrawal of the rejection.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-20 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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JAO:JHB/sxb

Date: June 8, 2006

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